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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,798	08/27/2003	Futoshi Osawa	DAIN : 747	3950

6160 7590 05/18/2005

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EXAMINER

SEVER, ANDREW T

ART UNIT PAPER NUMBER

2851

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,798

Applicant(s)

OSAWA ET AL.

Examiner

Andrew T. Sever

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 5-8 is/are rejected.
- 7) ☒ Claim(s) 2 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by

Moshrefzadeh et al. (US 6,417,966.)

The '966 reference teaches in figure 10 a diffusion sheet for use in a transmission-type screen comprising a main diffusion layer (1006 and 1004) having an incidence surface and an emergence surface which are parallel to each other (the line with arrows drawn on it passing through the entire sheet, indicates the direction that the light passes through the surface),

The main diffusion layer diffusing a light, which is substantially perpendicularly incident on the incidence surface, in a diffusion direction to be emitted from the emergence surface (this is the purpose of a diffusion layer),

A plurality of groove channels (1004) each having a substantially v-shaped cross-section being disposed in parallel to one another on the emergence surface of the main diffusion layer,

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Each groove channel being formed by two planes, curved surfaces, or bent planes which are joined to each other in the main diffusion layer,

A region sandwiched between the adjacent two groove channels providing a rib with a substantially trapezoidal cross-section, while the planes, curved surfaces, or bent planes which form each groove channel providing side surfaces of the rib (the surrounding material),

The light substantially perpendicularly incident on the incidence surface being reflected on the side surfaces of the rib so that the light is diffused in the diffusion direction (see the above indicated arrow), wherein

An assisting diffusion layer (1002, and 1020) is disposed on the side of the emergence surface of the main diffusion layer, or on both side of the emergence surface and the incidence surface of the main diffusion layer, the assisting diffusion layer having a light diffusion component for diffusion layer having a light diffusion component for diffusing a light at least in the same direction as the diffusion direction, and

The light diffusion component of the assisting diffusion layer is adjusted such that a gain curve of an emergent light from the diffusion sheet has no minimal point with respect to a direction perpendicular to the plurality of groove channels. (See either figure 6A or 6B, 6B shows the vertical gain which can be considered to be perpendicular to the plurality of groove channels and each point on figure 6a can be considered to be a direction perpendicular to the plurality of groove channels; since across a single point the gain curve does not change at all, there is no minimal point.)

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With regards to applicant's claim 3:

The grooves are taught to be filled with a material having a low refractive index, which is lower than that of the material forming the rib (see column 15 lines 24-34.) (Only the material 1005 is not transparent.)

With regards to applicant's claim 5:

See above.

With regards to applicant's claims 6 and 7:

The '966 reference teaches in figure 22 and in detail in column 19 lines 9-22 the use of lenticular lens which is taught can be a prism lens in lines 35-40 (pyramid).

With regards to applicant's claim 8:

A Fresnel lens is taught (1022).

Allowable Subject Matter

3. Claims 2 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed 3/8/2005 have been fully considered but they are not persuasive.

Applicant has amended the independent claims to include the limitation: "with respect to a direction perpendicular to the plurality of groove channels." Then applicant argues that this reads over the applied prior art, since according to the applicant figure 6b shows the gain curve of a direction that is vertical whereas applicant is claiming no minimal point in a horizontal direction.

While this may or may not be true as will be discussed later, the office notes that applicant's claims do not claim horizontal or vertical directions, rather applicant claims that there is no minimal point in a direction perpendicular to the plurality of groove channels. Since inherently more than one direction is perpendicular to the plurality of groove channels (for instance in the diffusion direction (out of the screen)), at least taking the perpendicular direction in the diffusion direction, there is no minimum. Further one of ordinary skill in the art would recognize that both the horizontal and vertical directions could be considered to be perpendicular, since the orientation of the groove channels themselves is not defined in the claim. Even if applicant were to specifically claim that the gain curve has no minimal point in a horizontal direction, one of ordinary skill in the art would recognize that horizontal and vertical are relative terms and it would simply be obvious to flip them so that the previously horizontal direction is now the vertical directions and accordingly the Moshrefzadeh reference would still read on applicant's claims. Accordingly the rejection has been repeated and made final.

Conclusion

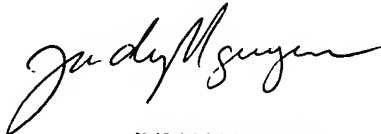
5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


JUDY NGUYEN
SUPERVISORY PATENT EXAMINER

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS